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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Goran Sundholm

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6031

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EXAMINER

KIM, CHRISTOPHER S

ART UNIT

PAPER NUMBER

3752

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,770	<b>Applicant(s)</b> SUNDHOLM, GORAN	
	<b>Examiner</b> Christopher S. Kim	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/30/09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 30, 2009 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

3. Claims 1-7, 9, 11-13, 15, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chatman (1,087,136).

In claim 9:

Chatman discloses an apparatus comprising:

a source 21 of an extinguishing medium (water, page 1, lines 83-91);

pump means 10;

means 5 for conducting at least some of the extinguishing medium;

at least one nozzle 11;

means 7, 15 for re-circulating at least some of the extinguishing medium;

means 6 for passing at least some of the extinguishing medium being re-circulated into a discharge pipe 26.

In claim 11:

Chatman discloses the means for re-circulating comprises:

a passage 7;

a pressure valve 15.

In claim 12:

Chatman discloses a valve element 28.

In claim 13:

Chatman discloses the valve element 28 being a check valve. A check valve operates on pressure differentials. Since pressure and temperature are related parameters, the valve element 28 is indirectly based on temperature.

In claim 15:

Chatman discloses a throttle element (valve 36 or valve upstream of valve 28).

4. Claims 1-6, 9, 11-13, 15, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Worthington (5,398,765).

Worthington discloses a fire extinguishing spraying apparatus comprising:

a source 16 of a medium;

a pump means 34;

a means 44 for passing at least a proportion of the medium to at least one nozzle 50;

re-circulating at least some of the medium (via valve 74);

passing at least some of the medium re-circulated into a discharge pipe

28.

Worhtington's valve 105 is a pressure regulating valve. Therefore, it inherently is controlled based on temperature because there is an inherent relationship between fluid pressure and temperature.

***Claim Rejections - 35 USC § 103***

5. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admission of Prior Art in view of Kirkelund et al. (4,941,505).

Claims 1, 9 and 17 are presented in Jepson format.

In claims 1 and 17:

Kirkelund discloses an apparatus comprising:

a source of medium 16;

a pump means 12;

means for passing at least some of the medium;

at least one nozzle 28;

re-circulating at least some of the medium (medium flowing through 18 and 40) which is not passed to the nozzle 28 back to a suction side of the pump means 12 (through line having check valve leading from return line 41 to the suction side of pump 12);

passing at least some of the medium re-circulating into a discharge pipe 41 (leading back to supply 16) and not the pump means 12.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided the recirculation and discharge pipe of Kirkelund to the Prior Art to control excessive pressure (Kirkelund, column 3, lines 5-12).

In claim 2:

Kirkelund further discloses the flow into the discharge pipe 41 is restricted (through orifice 40 and opening size of valve 18).

In claim 3:

Kirkelund discloses that at least some of the medium being re-circulated is passed into the discharge pipe 41. Therefore, it also performs the function at some set temperature. Applicant's claimed invention does not prevent passing some of the re-circulated medium into the discharge pipe outside of the set temperature.

In claim 4:

Kirkelund discloses that passage into the discharge pipe 14 is opened and/or closed by means of a valve element 18, 19. The valve 18, 19 is a pressure regulator. Since pressure and temperature are related parameters, the regulator 18, 19 is indirectly based on temperature.

In claim 5:

Kirkelund discloses the flow rate of the medium being re-circulated is reduced when the flow rate of the extinguishing medium to the nozzles 28 is increased (inherently performed by regulator 18, 19).

In claim 6:

Kirkelund discloses the flow rate of the medium being re-circulated is increased when the flow rate of the extinguishing medium to the nozzles 28 is reduced (inherently performed by regulator 18, 19).

In claim 9:

Kirkelund discloses an apparatus comprising:

- a source of medium 16;

- a pump means 12;

- means for conducting (line having valve 14);

- at least one nozzle 28;

- means (line having check valve leading from return line 41 to the suction side of pump 12) for re-circulating at least some of the medium from a pressure side of the pump means 12 to a suction side of the pump means 12;

- means (branch in line 41 leading to supply 16) for passing at least some of the medium being re-circulated into a discharge pipe 41 (discharge pipe 41 leading to supply 16).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided the recirculation and discharge pipe of Kirkelund to the Prior Art to control excessive pressure (Kirkelund, column 3, lines 5-12).

In claim 11:

Kirkelund discloses the means for re-circulating comprises:

- a passage (line have valve 18, 19 and line having check valve leading from return line 41 to the suction side of pump 12);

a pressure valve 18, 19.

In claim 12:

Kirkelund discloses a valve element 18, 19.

In claim 13:

Kirkelund discloses a means (regulator 19) for opening and/or closing the valve element 18. The regulator 19 is a pressure regulator. Since pressure and temperature are related parameters, the regulator 19 is indirectly based on temperature.

In claim 16:

Kirkelund discloses a check valve (check valve in line going from line 41 to suction side of pump 12).

Regarding claim 7, Prior Art in view of Kirkelund discloses the limitations of the claimed invention with the exception of the extinguishing medium being water based liquid. Water is well known in the art as being an extinguishing medium. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used water in the Prior Art in view of Kirkelund to reduce cost since water is plentiful.

Regarding claim 10, Prior Art in view of Kirkelund discloses the limitations of the claimed invention with the exception of the pump means 12 being a constant volume pump or a piston pump. Constant volume pumps and/or piston pumps are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a constant volume pump or a piston pump in the Prior Art in view of Kirkelund to reduce cost by using existing well proven components.



Regarding claim 8 and 14, Prior Art in view of Kirkelund discloses the limitations of the claimed invention with the exception of the pump means 12 being a 1-300 bar pressure pump. 1-300 bar pressure pumps are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a 1-300 bar pressure pump in the Prior Art in view of Kirkelund to reduce cost by using existing well proven components.

Regarding claim 15, Prior Art in view of Kirkelund discloses the claimed invention with the exception of the discharge pipe (line 41 leading to supply 16) being provided with a throttle element. Kirkelund discloses a throttle element 40. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided a throttle element in the in the Prior Art in view of Kirkelund to reduce the flow to the supply thereby increasing re-circulation.

6. Claims 8, 10, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatman (1,087,136).

Regarding claims 8 and 14, Chatman discloses the limitations of the claimed invention with the exception of the medium being recirculated at 1-300 bar. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have recirculated the foam concentrate at 1-300 bar in the device of Chatman for proper proportioning with the water.

Regarding claim 10, Chatman discloses the limitations of the claimed invention with the exception of the pump means being a constant-volume pump or a piston pump. Constant volume pump or piston pump is well known in the art. It would have been

obvious to a person having ordinary skill in the art at the time of the invention to have used a constant volume pump or a piston pump in the device of Chatman to reduce cost by utilizing existing equipment.

Regarding claim 16, Chatman discloses the limitations of the claimed invention with the exception of the check valve. Check valves are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have placed a check valve in the passage of Chatman to prevent backflow and ensure flow in one direction.

7. Claims 7, 8, 10, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worthington (5,398,765).

Regarding claim 7, Worthington discloses the limitations of the claimed invention with the exception of the foam concentrated being a water based liquid. Water based foam concentrates are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a water based foam concentrate in the device of Worthington to increase miscibility.

Regarding claims 8 and 14, Worthington discloses the limitations of the claimed invention with the exception of the medium being recirculated at 1-300 bar. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have recirculated the foam concentrate at 1-300 bar in the device of Worthington for proper proportioning with the water.

Regarding claim 10, Worthington discloses the limitations of the claimed invention with the exception of the pump means being a constant-volume pump or a

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piston pump. Constant volume pump or piston pump is well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a constant volume pump or a piston pump in the device of Worthington to reduce cost by utilizing existing equipment.

Regarding claim 16, Worthington discloses the limitations of the claimed invention with the exception of the check valve. Check valves are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have placed a check valve in the passage of Worthington to prevent backflow and ensure flow in one direction.

### ***Response to Arguments***

8. Applicant's arguments filed June 30, 2009 have been fully considered but they are not persuasive.

In response to applicant's argument that Kirkelund is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Kirkelund is reasonably pertinent to the particular problem with which the applicant was concerned. Kirkelund teaches recirculation and discharge from the outlet side of a pump.

Applicant argues that element 16 of Kinkelund is an oil supply and is not a discharge pipe. Pipe 41 leading to element 16 constitutes a discharge pipe.

Applicant argues that Worthington

Applicant argues that Worthington does not teach passing at least some of the extinguishing medium being re-circulated into a discharge pipe. Worthington discloses re-circulating extinguishing medium via regulator 105 and by-pass valve 74. Figure 3 shows a pipe connection upstream of by-pass valve 74 (downstream of regulator 105) to pipe 102 which in turn is connected to discharge pipe 28. The hose 28 and pipe 102 constitute a discharge pipe.

Applicant argues that Chatman's element 26 is not a discharge pipe. Pipe 26 discharges water into tank 24. Pipe 26 constitutes a discharge pipe.

### ***Conclusion***

9. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Christopher S. Kim/  
Primary Examiner, Art Unit 3752

CK